BOSCH
Invented for life

NWD-455 FlexiDome IP Cameras

- **High-impact, vandal-resistant enclosure**
- **Advanced color CCD network dome camera**
- **NightSense for low light situations**
- **High-quality MPEG-4, 4CIF at 25/30 IPS**
- **iSCSI recording**
- **Storage efficient tri-streaming: dual MPEG-4 and JPEG simultaneously**
- **Power over Ethernet (IEEE 802.3af compliant)**

The NWD-455 FlexiDome IP is a high-performance, 1/3-inch CCD network camera, designed to ensure the highest possible image quality at all times. This ultra-compact and vandal-resistant camera provides DVD-like quality MPEG-4 video at up to 25 and 30 images per second (for PAL and NTSC respectively). Network video signals are sent over IP networks and can be received and displayed on a PC web browser, viewed and recorded using the DiBos hybrid recording system, or managed as part of a VIDOS or BVMS video management system. Moreover, a BOSCH Video over IP (BVIP) decoder can decode the MPEG4 stream for viewing on a CVBS or VGA monitor.

FlexiDome IP uses MPEG-4 compression, bandwidth throttling, and multicasting capabilities to manage bandwidth and storage requirements efficiently, while delivering the best image quality and resolution. The analog monitoring video output and on-screen displays (OSD) simplify focus adjustment and network configuration, leading to lower installation and support costs. Power over Ethernet (PoE) makes installation easier and more cost-effective, since these cameras no longer require AC power.

Functions

MPEG-4 video encoding

The FlexiDome MPEG-4 encoder creates high-quality streaming video at low bit rates, minimizing bandwidth and storage requirements, which further reduces costs. Each FlexiDome IP camera can deliver up to 25 and 30 images per second (PAL and NTSC) at true 4CIF video resolution.

Intelligence

The FlexiDome IP supports increased intelligence at the edge that provides powerful tamper detection for various combined picture cases arising from: video loss, masking, hooding, defocusing, and diverted camera. Bosch also offers Intelligent Video Motion Detection (IVMD) as an additional licensable option. This provides video content analysis (VCA) directly at the video input for even more advanced VCA.

Tri-streaming video

FlexiDome IP cameras can generate two separate MPEG-4 video streams and one JPEG stream simultaneously, while giving access to five users at a time. This advanced tri-streaming capability, not typically found in other IP CCTV systems, enables the user to optimize live viewing and recording requirements to meet specific site and enterprise needs. For example, BOSCH Video over IP Systems (BVIP) can be configured to record video at one quality setting (e.g. 3.75 IPS at 2CIF), while simultaneously providing live

images at the best possible image quality (e.g. 30 IPS at 4CIF). Alternatively, the system deliver a high bandwidth, MPEG-4 stream to a local LAN user, while simultaneously streaming a low bandwidth MPEG-4 stream to a remote user over a WAN connection, while using the JPEG stream for remote viewing, for instance, on a PDA.

Power options

Three power options, PoE, 24 VAC (12 to 28 VAC) and 12 VDC (+11 to +36 VDC), are available on the NWD-455. Utilizing PoE makes installation easier and more cost-effective, since cameras do not require a local AC power source. Additionally, they can use an uninterruptible power supply (UPS), which will allow continuous operation, even during a power failure, e.g. in emergencies.

OSD-based network setup

Network parameters and basic camera set-up, such as lens set-up and back focus, are quickly and easily performed using the on-screen displays (OSD) and composite video monitoring output. Unlike other IP cameras, no network connection, PC configuration utilities, or other tools are required to set up FlexiDome IP.

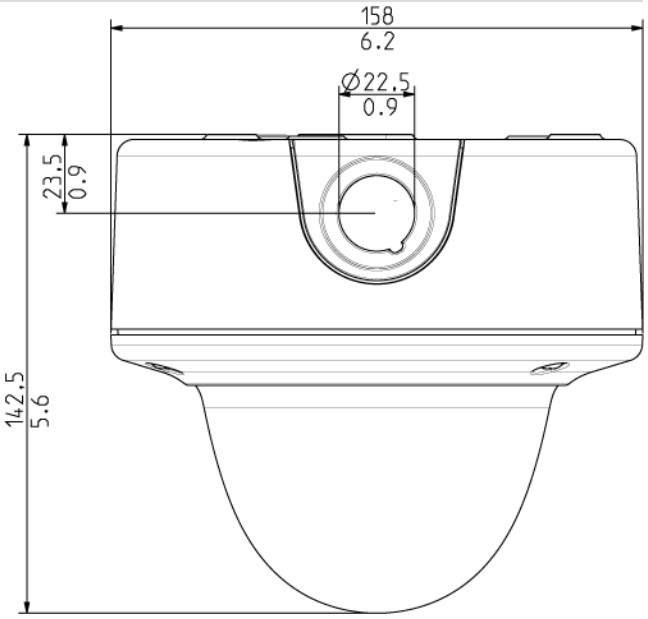
Recording

The FlexiDome IP cameras offer unparalleled recording options – network-attached utilizing iSCSI devices, and of course centrally, using network video recorders (NVRs). The iSCSI RAID 5 storage support enables a camera to act as a conventional DVR, while streaming high-performance live video across the network. The cameras also offer 10 Mb internal RAM storage.

Certifications and Approvals

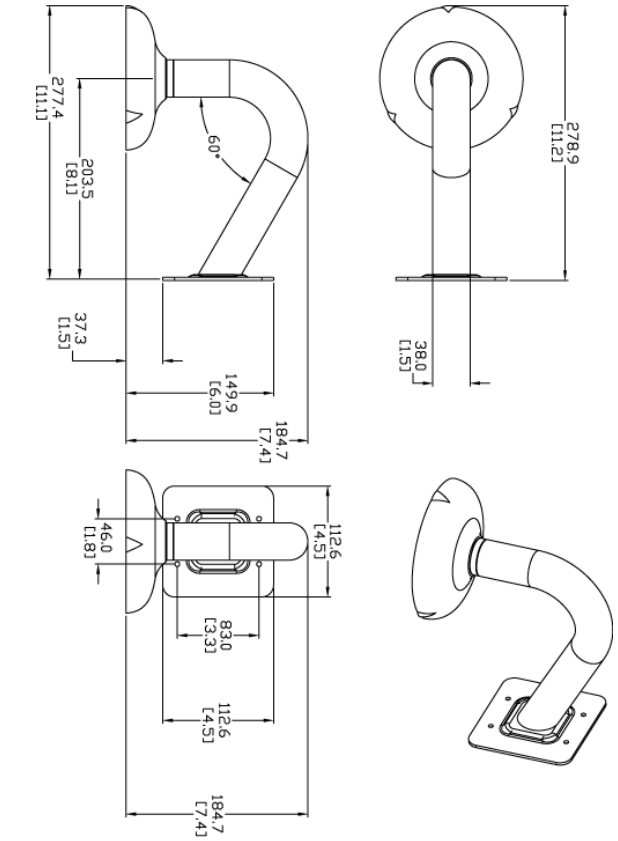
Safety	acc. to EN 60950-1 (CE) acc. to UL 60950-1
Immunity	acc. to EN 50130-4 (CE)
Emission	acc. to EN 55022 class B (CE) acc. to EN 61000-3-2 (CE); EN 61000-3-3 (CE) acc. to FCC CFR 47 Part 15, Class B acc. to AS/NZS CISPR 22 (equal to CISPR 22)

Installation/Configuration Notes

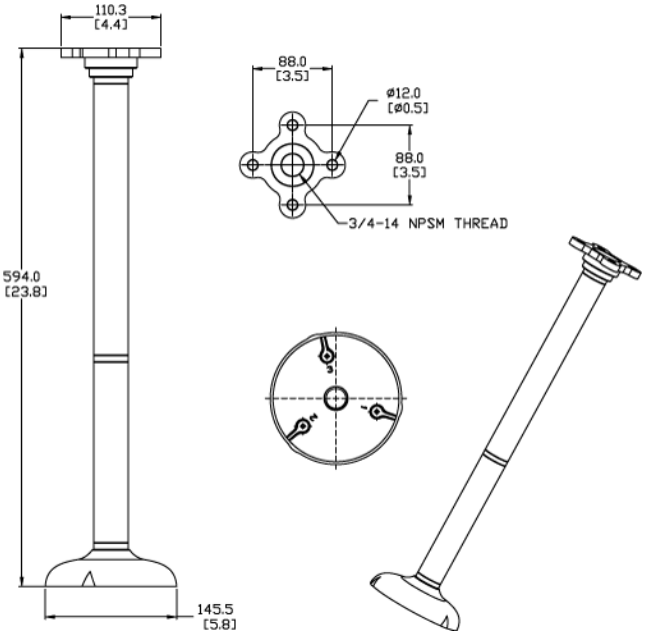


Dimensions in mm (in)

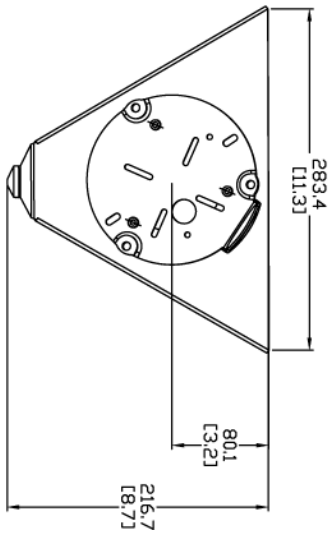
VDA-NWDWMT Wall Mount



VDA-NWDPMT Pipe Mount



VDA-NWDCMT Corner Mount



Parts Included

Quantity	Component
1	FlexiDome IP Camera
1	Focus aid
1	Quick Installation Guide
1	CD-ROM with manual, software, and tools

Technical Specifications

Electrical

Power			
Input voltage	+11 to +36 VDC (750 mA) 12 to 28 VAC, 45/65 Hz* (850 mA) PoE, IEEE 802.3af		
Power consumption	10.5 VA (max)		
Connector	3-pole push-in		
Video			
Video standards	MPEG-4; JPEG		
GOP structure	I, IP		
Data rate	9.6 Kbps to 6 Mbps (const. and variable)		
Sensor	1/3-inch interline CCD		
Sensor matrix PAL NTSC	 752 x 582 768 x 494		
Resolutions and frame rates	PAL	NTSC	
4CIF: 25/30 IPS	704 x 576	704 x 480	
2CIF: 25/30 IPS	704 x 288	704 x 240	
half D1: 25/30 IPS	352 x 576	352 x 480	
CIF: 25/30 IPS	352 x 288	352 x 240	
QCIF: 25/30 IPS	176 x 144	176 x 120	
Video out signal connector	1 x Analog composite (NTSC or PAL) BNC, 75 ohm		
Video S/N	50 dB		
Sensitivity (3200 K, scene reflectivity 89%)	Usable picture (30 IRE)	Usable picture (50 IRE)	Full video (100 IRE)
NWD-455V03			
NightSense	0.18 lx (0.016 fc)	0.39 lx (0.036 fc)	1.6 lx (0.15 fc)
color	0.44 lx (0.041 fc)	0.98 lx (0.091 fc)	3.9 lx (0.36 fc)
NWD-455V04			
NightSense	0.23 lx (0.021 fc)	0.5 lx (0.048 fc)	2.0 lx (0.19 fc)
color	0.58 lx (0.053 fc)	1.3 lx (0.12 fc)	5.1 lx (0.48 fc)
BLC	Center window weighting		
Gain	20 dB (max)		
White balance	Auto (2500 to 10000 K), AWB hold		
Auto black	On/off selectable		
Electronic shutter PAL NTSC	 1/50 to 1/150000 s (auto), 1/60 to 1/150000 s (auto)		

Optical	
Varifocal	IR-corrected, manual zoom and focus adjustment
Iris control	Automatic
Viewing angle 2.6 to 6 mm	Wide 98.5º x 75.3º (H x V) Tele 48.1º x 36.2º (H x V)
Viewing angle 3.7 to 12 mm	Wide 76.1º x 55.8º (H x V) Tele 23.8º x 17.9º (H x V)
Software control	
Unit configuration	Via web browser or Configuration Manager
Flicker control	50/60 Hz, selectable
Sharpness	Horizontal and vertical, symmetrical
Firmware	Flash ROM, remote update
Network	
Protocols	Telnet, RTP, HTTP, ARP,TCP, UDP, IP, ICMP, IGMPv2/v3, SNMP
Ethernet	10/100 Base-T, auto-sensing, half/full duplex, RJ45
Overall unit delay	120 ms (MPEG-4)
PoE	IEEE 802.3af compliant
Mechanical	
Dimensions (H x W x D)*	See drawing
Weight (without lens)	Approx. 1.8 kg (3.96 lb)
Mounting	
Color	White (RAL 9010), black inner liner
Material dome bubble Trim ring, camera body	 Polycarbonate, clear, UV-blocking, anti-scratch coating Aluminum
Adjustment range	360º pan, 90º tilt, ±90º azimuth
Environmental	
Operating temperature	-10 ºC to +40 ºC (+14 ºF to +104 ºF)
Storage temperature	-25 ºC to +70 ºC (-13 ºF to +158 ºF)
Humidity	20% to 80% relative humidity (noncondensing)
Water/dust protection	IP 54, NEMA-3R

Ordering Information

NWD-455V03-10P PAL, 2.6 to 6 mm F1.4 lens	**NWD-455V03-10P**
NWD-455V03-20P NTSC, 2.6 to 6 mm F1.4 lens	**NWD-455V03-20P**

Ordering Information

NWD-455V04-10P PAL, 3.7 to 12 mm F1.6 lens	**NWD-455V04-10P**
NWD-455V04-20P NTSC, 3.7 to 12 mm F1.6 lens	**NWD-455V04-20P**
TC 1334 Power Supply Unit 120 VAC/24 VAC, 60 Hz, 30 VA	**TC1334**
TC 120PS Power Supply Unit 110-120 VAC/15 VDC, 50/60 Hz, 300mA	**TC120PS**
TC 220PS Power Supply Unit 230 VAC/12 VDC, 50 Hz, 10 VA	**TC220PS**
TC 220PSX-24 Power Supply Unit 230 VAC/20 VAC, 50 Hz, 20 VA	**TC220PSX-24**
Accessories	
VDA-NWDPMT PENDANT MOUNT FOR FLEXIDOME IP SERIES	**VDA-NWDPMT**
VDA-NWDWMT WALL MOUNT FOR FLEXIDOME IP SERIES	**VDA-NWDWMT**
VDA-NWDCMT CORNER MOUNT FOR FLEXIDOME IP SERIES	**VDA-NWDCMT**

Europe, Middle East, Africa:
Bosch Security Systems B.V.
P.O. Box 80002
5600 JB Eindhoven, The Netherlands
Phone: + 31 40 2577 284
Fax: +31 40 2577 330
emea.securitysystems@bosch.com
www.boschsecurity.com

Americas:
Bosch Security Systems, Inc.
130 Perinton Parkway
Fairport, New York, 14450, USA
Phone: +1 800 289 0096
Fax: +1 585 223 9180
security.sales@us.bosch.com
www.boschsecurity.us

Asia-Pacific:
Bosch Security Systems Pte Ltd
38C Jalan Pemimpin
Singapore 577180
Phone: +65 6319 3450
Fax: +65 6319 3499
apr.securitysystems@bosch.com
www.boschsecurity.com

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